REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-12 and 15-20 are presently active in this case, Claims 1 and 17 having been amended having been added by the present amendment, and Claims 13, 14, and 21-26 having been withdrawn from consideration.

In the outstanding Official Action, Claims 1-7 were rejected under 35 U.S.C. 102(b) as being anticipated by Roth (USP 6,096,175); Claims 1-3, 9-10, 17-18, and 20 were rejected under 35 U.S.C. 102(e) as being anticipated by Stonas et al. (USP 6,919,009, hereinafter called "Stonas"); Claims 1-3, and 9 were rejected under 35 U.S.C. 102(e) as being anticipated by Yang et al. (US 2002/0076575 A1, hereinafter called "Yang"); Claim 8 was rejected under 35 U.S.C. 103(a) as being unpatentable over Stonas in view of Jin (US 2004/0071951); Claims 11-12 were rejected under 35 U.S.C. 103(a) as being unpatentable over Stonas in view of Sano et al. (US 2001/0001472 A1); Claims 15-16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Stonas in view of Liang et al. (US 2003/0053190 A1); and Claim 19 was rejected under 35 U.S.C. 103(a) as being unpatentable over Stonas in view of Roth.

In light of the several grounds for rejection, Claim 1 has been amended to clarify the claimed invention and thereby more clearly patentably define over the cited prior art. Support for the amendatory language added to Claim 1 can be found at page 11, penultimate paragraph. No new matter has been added. Additionally, Claim 17 has been amended to be a dependent claim dependent on Claim 1. No new matter has been added by this amendment to Claim 17.

In view of the present amendment to Claim 1, Applicants respectfully request reconsideration and withdrawal of the outstanding grounds for rejection, for the reasons next noted.

Roth in figure 6 discloses a method where a release layer (50) is formed on a planar (i.e. not patterned) substrate. The release layer (50) may be an oxide layer (42). A waste layer 52 is then formed on top of the release layer (50). The waste layer may be photoresist or other readily removable material (column 8, lines 43 to 44).

According to Roth, only the waste layer is patterned (e.g. by imaging/etching – column 8 lines 45 to 55) and the stent material is sputtered over the patterned waste layer. The waste layer 52 is dissolved and then the release layer is etched or dissolved to release the stent.

In contrast to Roth, according to the claimed invention, the substrate itself is patterned as shown in figure 1A. In Applicant's invention, the substrate provides both the function of the waste layer and the release layer since it is both soluble and patterned. Thus, in Applicant's invention there is no need for the formation of a release layer or a waste layer

Thus, the claimed invention is novel over Roth by virtue of the claimed features of the substrate itself being both patterned and soluble. In Roth the substrate is planar and layers are provided on the substrate which may be patterned. However, the steps of forming extra layers and then patterning them is time consuming and liable to variations in quality if the process is scaled up. In the claimed invention, the substrate itself is patterned and is soluble. The patterned substrate may be produced by many techniques, for example, injection moulding, insert moulding or pressing in addition to etching techniques.

Roth does not suggest the present invention as Roth relies on the formation of extra layers overlying a planar substrate in order to fabricate the free standing structure. A nonsoluble planar substrate with a release layer and a soluble waste layer is not equivalent to a soluble patterned substrate as the substrate and two layer arrangement of Roth is more complicated to manufacture. This is described in the description from the fourth paragraph of page 2 to the second paragraph of page 3 of Applicant's specification.

Stonas describes a structure with a planar substrate 201 having a four layer stack of layers 202, 203, 204 and 205 then formed overlying said substrate. The top three of these layers (203, 204 and 205) are then patterned as shown in figure 3C. Electrochemical deposition is then performed using layer 202 (which has not been patterned and overlies said substrate) as a plating electrode. In Stonas, the substrate (201) is planar and not soluble.

Thus, Stonas, like Roth, fails to teach a soluble patterned substrate.

Furthermore, in Stonas it is important that a metal layer (202) is formed underneath the pattern otherwise electrochemical deposition cannot take place. Thus, there is no suggestion to replace the multilayer structure of Stonas with a single soluble patterned substrate.

Furthermore, it is respectfully submitted that the multiple layer structures of Roth and Stonas are not equivalent to the patterned soluble substrate of the claimed invention. This is true because, in both Roth and Stonas, the term substrate is used to mean a semiconductor substrate and not a substrate plus multiple layers. Further, Claim 1 is limited to a soluble substrate, i.e., in the claimed invention the whole substrate is soluble. This is not the case in Roth and Stonas where just one or two layers which are formed on the substrate are soluble. Therefore, in view of the noted deficiencies in Roth and Stonas, it is respectfully submitted that amended Claim 1 patentably defines over both these references whether considered alone or in combination.

Turning now to Yang, in Yang, patterned elastomeric mould 20 is pressed against a surface 28, and a ceramic precursor 36 is then injected into the spaces between the elastomeric mould 20 and the surface 28. The ceramic pre-cursor is then cured and mould 20 and surface 28 are removed.

In contrast, according to the claimed invention, a single mould (i.e. no additional surface 28) is used in order to make free standing structures. Further, according to amended Claim 1, the free standing structure is made by directional deposition as explained with reference to figure 1A. The directional deposition, as claimed, ensures that there is a discontinuity between the material which is deposited on the upper surface (112) of the pattern and that deposited on the lower surface of the pattern (116).

Thus, it is respectfully submitted that the directional deposition recited in Claim 1 distinguishes over Yang, which includes no such teaching.

Further, the claimed directional deposition is incompatible with the method of Yang which uses a surface 28 to cover the pattern on the mould 20, which would not work with directional deposition since the surface 28 of Yang would prevent any material being deposited on the pattern if directional deposition was used.

In view of the above noted differences between the claimed invention and the cited prior art, the amended Claims are believed to be patentably distinguishing over the cited prior art. Furthermore, the deficiencies in the prior art above discussed are not believed to be remedied by the remaining references of record.

Consequently, in view of the present amendment and in light of the above comments, no further issues are believed to be outstanding, and the present application is believed to be in condition for allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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